Pharmacy NewsCapsule

January/February 2001

Drug Regimen Review for Assisted Living Residents

Doug Englebert
Pharmacy Practice Consultant PRQI

Why is drug regimen review necessary in assisted living facilities? A thorough drug regimen review in any setting may lead to reductions in the number of medications utilized, positive outcomes for residents and decreased costs. Drug regimen review can lead to discoveries like drug interactions, drug side effects, duplicative therapy and the list goes on. But why is drug regimen review in an assisted living setting so important?

In most cases, the demographics of elderly residents in assisted living facilities may not be that much different than that seen in nursing homes. Very often residents in assisted living facilities have the same age, weight, height and number of diagnoses as their cohort in nursing homes. However, in some cases due to regulations, funding or care delivery structure, nursing home residents may take significantly fewer medications than other older adults in community settings

For example, nursing home residents typically see one primary physician and obtain medications from one pharmacy. Residents in assisted living facilities may see multiple physicians and obtain medications from multiple pharmacies. In this example an assisted living resident may be on multiple medications, some which are duplicative therapy, some which may interact with each

Cont page 4

INSIDE THIS ISSUE

Type 2 Diabetes and the Elderly

Doug Englebert
Pharmacy Practice Consultant PRQI

Type 2 Diabetes is diagnosed based on one of the following three criteria:

- A fasting glucose level of 126 mg/dl or greater
- A 2-hour plasma glucose level of 200 mg/dl or greater on an oral 75 g glucose tolerance test, or
- A random glucose level of 200 mg/dl or greater in the presence of diabetes symptoms.

An abnormal result should be confirmed with a second abnormal result.

What is the concern with type 2 diabetes in the elderly? First, over ½ of the cases of type 2 diabetes involve individuals who are age 65 or older. Second, the elderly are at risk for complications, including long term complications of type 2 diabetes. Complications that may be more pronounced in the elderly include dehydration, hypoglycemia, visual disturbances, cognitive impairment, and depression. These complications tend to work in a circular fashion. For example, if cognitively impaired, an elderly person may take too much medication leading to hypoglycemia. The hypoglycemia may lead to increased symptoms of dementia that is attributed to cognitive impairment rather than an improper dose of medication.

What should treatment goals include? Individuals age 65 may live another 15-20 years or more, so long term complications from diabetes are a real concern. Therefore treating only current symptoms of diabetes would be unacceptable. The goal should include appropriate glycemic control to reduce development of the long-term complications, such as blindness and stroke.

The American Diabetes Association has identified the following goals for glycemic control:

- Premeal plasma glucose level of 80-120 mg/dl
- Bedtime plasma glucose level of 100-140 mg/dl, and
- HBA_{1c} of less than 7%.

Continued page 3

New Drugs

Doug Englebert
Pharmacy Practice Consultant PRQI

Brand Name	Generic Name	Use
Detrol LA	Tolterodine Tartrate	Oral treatment of overactive bladder with symptoms of urgency and frequency.
Protopic	Tacrolimus	Ointment for moderate to severe atopic dermatitis.
Trizenox	Arsenic Trioxide	Injection for acute promyelocytic leukemia.
Novantrone	Mitoxantrone	Injection for reducing neurologic disability and relapses in multiple sclerosis.
Tizivir	Abacavir, Lamivudine, Zidovudine	Oral combination of three drugs for HIV-1 infection.
Venofer	Iron Sucrose	Injection for iron deficiency anemia.
Micardis	Hydrochlorothiazide, Telmisartan	Oral combination of two drugs for hypertension.

Med Error Corner

Doug Englebert Pharmacy Practice Consultant

As we head into a new millenium let's take a look at what is occurring on the national front regarding medical errors and more specifically medication errors. Many government and private initiatives are occurring to study the cause of medication errors, develop solutions to prevent the errors and implement and improve those solutions. Many of the initiatives are targeting hospitals, nursing homes and other institutional settings.

Medication errors occur in community settings as well and this can lead to the hospital stay or long term care placement. What efforts can occur to avoid medication errors in a community setting?

One effort can be individualization. The Institute for Safe Medication Practices recently published a report describing an elderly man with poor eyesight who, intending to take a capsule of his heart medication, nearly asphyxiated when he gagged on the desiccant capsule left in the medication bottle. In another case, an elderly woman with poor eyesight accidentally instilled super glue in her eye, mistaking the super glue for her eye drops.

In each case serious harm did not occur, but these situations raise

Continued on page 4

Focus Drug

Doug Englebert
Pharmacy Practice Consultant PRQI

Nexium® (Esomeprazole)

This is another proton pump inhibitor or PPI. Proton pump inhibitors are those medications that are used to treat peptic ulcer and gastroesophageal reflux disease or GERD.

The "approval letter" status of this medication in October 2000 now means there will be 5 of these medications; Prilosec®(omeprazole), Protonix®(pantoprazole), Prevacid®(lansoprazole), Aciphex®(rabeprazole) and now Nexium®(esomeprazole). To date none of these medications have been shown to be statistically superior over the others in comparative tests for treating acid-related gastrointestinal disorders.

Nexium® however is somewhat different, as it is a purer form of Prilosec®. Studies suggest that Nexium® will provide better acid control without additional adverse effects.

Since this medication is not yet "fully" approved, the exact uses and dosing have not yet been established. Pricing for this medication is not yet available. It is expected that this medication will be available in an injectable form, which would provide a significant advantage. The extent that this medication will be used will be determined by its FDA approved uses, cost and its availability in an injectable form.

Continued on page 3

Continued from page 1

These goals may not be appropriate for all elderly people with type 2 diabetes. Treatment goals should take quality of life into consideration. As a person ages and life expectancy decreases, the long term complications may be less concerning and hypoglycemia and symptoms of diabetes may take a more significant role in treatment goals.

What treatment options are available for the elderly? Education, diet, exercise and medications are all components of good diabetes treatment. Medical management of associated medical problems, like high cholesterol, also cannot be overlooked.

In the elderly population, diet and exercise can be a challenge. Very often, weight loss may not be a primary objective for the elderly. Rather, nutritional planning should be focused on assuring a balanced diet that provides appropriate vitamins, minerals and caloric needs. Limitations like arthritis and heart failure may impede exercise and individualized alternatives to address fitness should be considered.

There has been a proliferation of new medications for diabetes. Ranging from new insulins that work faster and longer to oral pills like Actos®, that sensitize individuals to insulin. In most cases, individuals with type 2 diabetes are initially treated with a single medication. If effective, that medication is given until its maximum dose is reached and than an additional agent may be added.

The medications that are available work in different manners and have different side effects. It's important that medications be individualized, administered appropriately, and sufficiently monitored. For example, some insulins need to be given 30 minutes prior to a meal, others 15 minutes prior to a meal. Medications, like Actos®, may need liver function monitoring because of the risk of liver toxicity.

When reviewing patients' medications and diagnoses, take a close look at those individuals with type 2 diabetes. Does the care plan involve the patient in decision making? Is there a goal defined? Are the treatments utilized being appropriately administered? Are the treatments being adequately monitored?

Remember each person is at a different stage in his or her life. Elderly individuals require individualized treatments. In some cases, the treatment of diabetes symptoms, namely hypoglycemia, may be more important than strict glycemic control.

Since the topic of PPI medications was introduced here, let's point out a medication error that has the potential to occur. The Institute for Safe Medication Practices (ISMP) recently published a warning that the drug Aciphex®(rabeprazole) for GI acid disorders could be mixed up with the drug Aricept® (donepezil), which is for mild-to-moderate dementia.

This mix up could occur because the manufacturers' packaging is very similar. These medications are packaged in the same size bottle, with the same size lettering and color scheme. Due to their brand names being similar, they may be placed on the shelf in the same proximity. These factors increase the risk that a medication error will occur.

If there are medications you would like featured here please send an email to Doug at engleda@dhfs.state.wi.us

The Drug Enforcement Administration (DEA) recently released a draft paper on controlled substances in long-term care facilities. Comments were accepted through November 2000. It is expected that the finalized paper will be published in the Federal Register as a proposed rule in early 2001. Please watch this newsletter for updates.

Did you know?

- The average cost of a fall in a skilled nursing facility is $800.
- Psychoactive medications are typically involved in over 80% of all falls by elderly nursing facility residents. Are medications being reviewed when a fall occurs?

Continued from page 1
other and some which are treating a side effect caused by another medication.

It has been fairly well documented that drug regimen review can decrease the number of adverse drug events. However, assisted living facilities may have barriers that interfere with appropriate drug regimen review. Those barriers may include: facilities unwillingness to pay pharmacists to conduct reviews, residents unwilling to pay for the review, pharmacists unwilling to perform the review, lack of information within the facility to perform an adequate review, and lack of knowledge about the significance of drug regimen review.

These barriers require individuals to become innovative. Pharmacists may need to use a different approach in how they perform drug regimen review as they will not have the same information and records they have available to them in a nursing home. Assisted living facilities need to become innovative in showing the value of drug regimen review to residents and to management. Lastly, regulations need to exist and be enforced to assure quality drug regimen review is being performed. In the end, drug regimen review should be a win-win for everyone involved.

From page 2-Med Error

questions as to how those situations can be avoided. In both cases the individuals had poor eyesight. Some individual interventions may include removing the desiccant from the bottles, informing the person there is a desiccant in the bottle, not purchasing items in containers that look like medications, and labeling medications with large print.

Many medication errors in the community setting can be avoided with planning and education.

Consultant's Corner

Doug Englebert *Pharmacy Practice Consultant PRQI*

This section is basically a miscellaneous section that will show up each issue and will contain tidbits of information, most of which will come directly from your questions. If there is a topic you want more detailed information about, please drop me an email at engleda@dhfs.state.wi.us and I'll see what I can find.

- Medications and Dining

Surveyor observations of the medication pass and resident dining are intended to identify practices that may interfere with the quality of the residents dining experience. The surveyor guidance in the State Operations Manual does not prohibit the administration of medications during meal service.

- Medications administered with or without food.

Quite frequently drug manufacturers manufacture old medications in new formulations. In some cases the old medication, in a tablet form, required the medication to be given with food. However, the new formulation, in a coated capsule, may not require it to be given with food. Please make sure of the formulation and check the manufacturer recommendations when determining if a medication error occurred.

- PRN Medications and Variable Dosing

It is common practice for physicians to write orders for "as needed" medications with variable dosing. For example, give one or two Tylenol 325 mg tablets every 4-6 hours as needed for dental pain. In a healthcare setting, "as needed" medications require assessment. Assessment may include the extent of pain in order to determine if one or two tablets should be given. The type of medication, patient condition and other factors will determine the extent of the assessment. If there is any question regarding variable dose orders, the physician should be contacted to clarify or provide additional assessment as necessary.

References are available upon request.